ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Preparation For International Radiocommunications Union World Radiocommunication Conference	)	IC Docket No. 94-31

REPLY COMMENTS OF COMSAT WORLD SYSTEMS

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Summary

In its Reply, CWS discusses the availability of the 13.75 - 14.0 GHz band for the FSS; the elimination of consideration of the 13.75 - 14.0 GHz band as a feeder link band for MSS systems; the proposed use of the 30 GHz band for MSS feeder links; and future Commission processes to prepare for WRCs. CWS believes that the 13.75 - 14.0 GHz band for FSS operations should be finalized at WRC-95, as the sharing studies have been completed and adopted by the ITU-R. This band should not be allocated as an MSS feeder link band at WRC-95 and the Commission should continue its efforts to eliminate the 13.75 - 14.0 GHz band from the list of bands being considered. CWS submits that the Commission should limit the proposed use of the Ka-band to 200 MHz for NGSO MSS feeder links and assure that this band is available to satisfy the expanding markets for GSO FSS systems.

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COMSAT Corporation, by its COMSAT World Systems business unit ("CWS"), herein submits its Reply Comments on the Federal Communications Commission's Second Notice of Inquiry (Second Notice) in the above-captioned proceeding related to preparations for the 1995 ITU World Radiocommunication Conference (WRC-95).

Introduction

The Commission has received numerous comments in response to its Second Notice, the majority of which relate to the Mobile Satellite Service ("MSS") and to feeder links for MSS systems which are subjects on the agenda for WRC-95. These comments reflect the importance of these issues to the U.S. mobile satellite industry and the urgency with which they need to be

addressed at WRC-95.[1] There are, of course, other important issues on the agenda that are raised in the Second Notice and several parties also filed comments on these matters. CWS will reply to comments that addressed matters of specific importance to the Fixed Satellite Service ("FSS").

As we stated in our Comments, CWS is in general agreement with the Preliminary FCC Draft Proposal contained in Appendix 1 to the Second Notice, as it relates to matters impacting the FSS service. In our Reply, we will focus on the availability of the 13.75 - 14.0 GHz band for FSS; the elimination of consideration of the 13.75 - 14.0 GHz band as a feeder link band for MSS systems; the proposed use of the 30 GHz band for MSS feeder links; and future Commission processes to prepare for WRCs.

Fixed Satellite Service in the Band 13.75 - 14.0 GHz

The band 13.75 - 14.0 GHz was allocated to the FSS service on a primary basis at WARC-92. The Commission's Second Notice proposes to take necessary actions at WRC-95 to reflect the fact that the necessary studies called for in Resolution 112, at WARC-92, have been completed and adopted by the ITU-R Sector. As a result, this new band will be available to help meet the needs of expanding FSS markets.

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[1] COMSAT Mobile Communications will respond in a separate filing to comments on these MSS issues.

CWS anticipates that WRC-95 will suppress Resolution 112, since the requirements have been met with the modifications to RR 855A and RR 855B, and this band will become available for use by FSS systems. This will benefit the users of the INTELSAT system as well as other satellite systems that now plan to make use of this new band.[2]

We note that Hughes Space and Communications Company and Hughes Communications Galaxy, Inc. (referred to collectively as "Hughes"), support the Commission's proposal for the 13.75 - 14.0 GHz band. GE American Communications, Inc. ("GE") also supports the proposal in the Second Notice to make the allocation at 13.75 - 14.0 GHz available on a primary basis to the FSS service.[3]

Eliminate Consideration of the 13.75 - 14.0 GHz Band as a Feeder Link Band

The Commission's Second Notice does not propose the band 13.75 - 14.0 GHz as a candidate band for non-geostationary MSS ("NGSO-MSS") feeder links, although the international summary table of candidate bands for feeder links, which was developed by the ITU-R TG 4/5, does include 13.75 - 14.0 GHz as a potential band. CWS strongly supports the Commission's decision not to

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[2] See Comments of Hughes at 16, 17 and 21.

[3] See Comments of GE at 2.

propose this new FSS band as a candidate for feeder link spectrum to be allocated at WRC-95.

In this regard, we are pleased that the U.S. delegation to the ITU-R Conference Preparatory Meeting ("CPM") took the position that the 13.75 - 14.0 GHz band should be dropped from the summary table and should no longer be considered as a potential band for MSS feeder links. There was strong support for this position, but some other countries felt that the band should not be dropped at this point, and that the meeting should not debate which bands to keep and which ones to delete from the table of candidate bands. Therefore, the CPM did not take action to eliminate the 13.75 - 14.0 GHz from the table of possible feeder link bands.

Nevertheless, it appears to us that WRC-95 will not allocate this band as a feeder link band based upon the broad support at the CPM not to consider this band for possible feeder link use, and the inclusion of a cautionary note in the CPM Report[4] that identifies the difficulties that would be encountered if feeder link operations with reverse direction transmission were allowed in the band. A large number of GSO FSS systems have already filed with the ITU for operation in this band, and some of these systems are already being implemented. Moreover, it is our

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[4] See Report of the Conference Preparatory Meeting for WRC-95 & WRC-97, ("CPM Report"), CPM 95/118 April 4, 1995, Table 15, at 68, n. 2.

understanding that the Informal Working Group 4 ("IWG-4") of the Commission's Industry Advisory Committee ("IAC") has now decided not to include the 13.75 - 14.0 GHz band in its final report to the Commission, because of the constraints such use would place on the newly allocated FSS and the other existing services in the band.

In its Comments, Hughes supports the Commission's decision and the IWG-4 recommendation not to include the 13.75 - 14.0 GHz band as a possible candidate for non-GSO MSS feeder links.[5] CWS encourages the Commission and the U.S. delegation to the WRC-95 to maintain this position and to work with other countries at WRC-95 to ensure that this band is not allocated as a feeder link band.

As a general observation regarding the application of RR 2613, CWS notes that there was broad support by commentors to waive RR 2613 in bands designated for NGSO MSS feeder links. As stated in CWS's Comments, we believe this approach is the most practical solution in bands below 17.7 GHz, where NGSO MSS feeder links would operate in the reverse direction transmission mode. Also, based upon the understanding that developed during the ITU-R CPM preparatory process, CWS believes that work should continue on identifying ways to make the application of RR 2613 more effective in the bands where this regulation will continue to

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[5] Comments of Hughes at 17.

apply.

Feeder Link Bands at 30 GHz

New issues have been raised in the comments filed by Teledesic Corporation ("Teledesic") regarding possible use of the 17.7 - 20.2 and 27.5 - 29.5 GHz bands (referred to herein as "the Ka band"), for feeder links for NGSO MSS systems and for NGSO FSS systems. CWS believes that when the agenda for WRC-95 was agreed at WRC-93, all participants at that conference understood that the feeder link requirements, and the issues to be studied in preparation for WRC-95, pertained to those MSS systems intending to operate in the MSS bands at 1.5 / 1.6 GHz and at 2 GHz. Therefore, essentially all work done within the ITU-R and within the Commission's IAC process to arrive at a technical understanding of the issues involved, and to develop practicable solutions, was based upon that understanding. CWS is very concerned about the possible inclusion of the stated spectrum requirements for the satellite system proposed by Teledesic in the WRC-95 deliberations, at this late date.

CWS strongly disagrees with Teledesic's position that the Commission must assume that full sharing is not possible and seek at WRC-95 the minimum of 1000 MHz, in each direction, which Teledesic states is required to accommodate all NGSO feeder link use proposed in the Ka band. The system requirements envisioned

by Teledesic for MSS feeder links for NGSO systems and for FSS NGSO operations were not considered during any of the deliberations which led to the technical and regulatory solutions for NGSO MSS feeder links which were recently concluded at the ITU-R CPM.[6] Therefore, no basis has been developed for consideration of this potential magnitude of spectrum requirements at WRC-95. Indeed, spectrum requirements for NGSO FSS systems are not on the WRC-95 agenda. As the Commission is well aware, the Ka band is already allocated to the FSS in the International Table of Allocations. The only issue on the WRC-95 agenda concerning the Ka band has to do with feeder links for NGSO MSS systems operating in the 1.5/1.6 GHz and 2 GHz service bands. The Teledesic proposal goes well beyond this limited agenda item.

We agree with Hughes that the Ka band has generally been considered as an expansion band for FSS operations and has also been viewed as the band for new GSO FSS broadband services, considering the congestion in the C band and Ku band for FSS.[7] Therefore, as we previously stated, CWS is concerned that too much of the 20/30 GHz Ka band may be preempted for NGSO MSS feeder links and other operations, depending on the outcome of

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[6] Two possible options are given in the CPM Report for NGSO MSS feeder links in bands above 17.7 GHz. Neither option takes into account the type of requirements envisioned in the Teledesic proposal. See CPM Report at 161.

[7] See Comments of Hughes at 3.

other Commission proceedings concerning use of the Ka band for local multi-point distribution service ("LMDS")[8] and the Teledesic application for NGSO FSS operations in the band.[9]

The options related to the provision of feeder links for NGSO MSS systems operating in the Ka band currently available for decision at WRC-95 were developed with the understanding that there would be a limited number of systems and earth stations requiring a minimal amount of spectrum operating in the Ka band. Considering Teledesic's proposal, and depending upon the NGSO MSS sharing assumptions used, the requirements at Ka band could double, triple or even quadruple the requirements envisioned in the preparatory work for WRC-95.

The extent to which the types of services and systems proposed for operation in the Ka band can share spectrum has yet to be fully explored. For example, while some studies have shown that sharing spectrum at Ka band between NGSO MSS feederlink systems is possible,[10] detailed studies have not been conducted

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[8] Amendment of Part 1 and Part 21 of the Commission's Rules to Redesignate the 27.5 - 29.5 GHz Frequency Band and to Establish Rules for Local Multipoint Distribution Service, 9 FCC Rcd 1394 (1994) (Second Notice of Proposed Rulemaking).

[9] See Comments of CWS at 6. The Teledesic application has been filed with the Commission but has not been placed on public notice for comments.

[10] See Comments of CWS at 8 (referring to USA CPM Doc No. 27, In-Line Interference Between the Feederlinks of Non-GSO Constellations, February 24, 1995).

on the feasibility of sharing between GSO and NGSO FSS systems of the magnitude envisioned in the Teledesic application. Moreover, regarding possible LMDS operation in the Ka band, CWS understands that studies conducted in the 28 GHz rulemaking show that sharing between LMDS and FSS is not feasible. Therefore, we generally agree with Hughes to the extent that its comments call for continued studies on sharing. However, we do not believe that sufficient time remains before the WRC-95 Conference to complete the necessary studies, nor is it necessary to do so.

As such, the Teledesic proposal is not ripe for inclusion in the work for WRC-95. We could, however, support a decision to include the topic of NGSO FSS networks on the agenda for WRC-97.

In conclusion, CWS confirms the position taken in our earlier comments that the Commission should limit the allocation to 200 MHz in each direction for NGSO MSS feeder links in the Ka band.[11] However, in view of the above, it appears that the Commission could take actions in response to other proceedings (the LMDS rulemaking and Teledesic's proposal) which would severely impact the use of the Ka band for GSO FSS systems. Depending upon these decisions, it may become necessary to adopt the approach advocated by Hughes and require NGSO MSS feeder links to share spectrum with GSO FSS systems, instead of making a

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[11] See Comments of CWS at 7.

discrete allocation of 200 MHz for NGSO MSS feeder links.[12]

The Commission's Conference Preparatory Processes

We generally endorse the suggestions made by American Mobile Satellite Corporation ("AMSC") regarding measures that the Commission could take to improve and regularize the process for preparing for WRCs.[13] Many of these suggestions are consistent with those made by CWS in comments on the First and Second Notices.[14]

The timeline described by AMSC illustrates the importance of regularizing the preparatory process to adhere to a strict schedule. This rigorous two year re-occurring schedule does not permit any slippage in meeting milestones.[15] Clearly, conference preparation must now be an ongoing process requiring dedicated Commission resources to develop and support positions at WRCs where the issues for U.S. industry and for government users of the spectrum are critical.

CWS encourages the Commission to set forth a comprehensive

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[12] See Comments of Hughes at 2, 3, 6, 7, 8, 12, 13.

[13] See Comments of AMSC at 13-16.

[14] See Comments of CWS at 13-15.

[15] See Comments of AMSC at 16.

improved preparatory process based on the comments from CWS and others, and on the suggestions contained in the section of the report of IWP-6 dealing with conference preparatory processes, to be included in the final IAC Report to the Commission on WRC-95. There has been broad industry participation in this group and we believe the report contains many suggestions that should be considered by the Commission.

Finally, any process established by the Commission must have the resources needed and the full support and confidence of the private and public sectors to be successful. The importance of WRCs to the interests of the U.S. telecommunication sector demands high priority at the Commission.

Conclusion

The comments received by the Commission concerning issues on the WRC-95 agenda of interest to the FSS community support CWS's view that the 13.75 - 14.0 GHz band for FSS operations should be finalized at WRC-95, as the sharing studies have been completed and adopted by the ITU-R. This band should not be allocated as a MSS feeder link band at WRC-95; the Commission should continue its efforts to eliminate this band from the list of bands being considered. CWS believes that the Commission

should limit the proposed use of the Ka band to 200 MHz for NGSO MSS feeder links and assure that this band is available to satisfy the expanding markets for GSO FSS systems.

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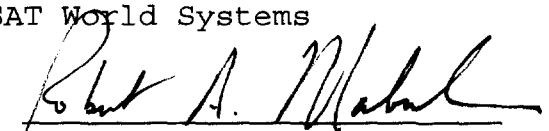
By: 

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April 14, 1995

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